



Massachusetts Department of Environmental Protection  
Source Water Assessment and Protection (SWAP) Report  
for  
**Great Barrington Fire District**

### What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

### Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

**Table 1: Public Water System Information**

<i>PWS Name</i>	Great Barrington Fire District
<i>PWS Address</i>	20 Castle Street
<i>City/Town</i>	Great Barrington
<i>PWS ID Number</i>	1113000
<i>Local Contact</i>	Mr. Michael Vincent
<i>Phone Number</i>	413-528-0133

### Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

#### Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures.

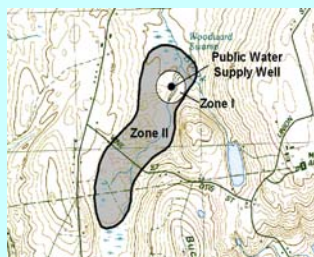
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

#### This report includes the following sections:

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection Conclusions and Recommendations
4. Appendices

### What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area.



### Glossary

**Aquifer:** An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

**Hydrogeologic Barrier:** An underground layer of impermeable material (i.e. clay) that resists penetration by water.

**Recharge Area:** The surface area that contributes water to a well.

**Zone I:** The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

**Zone II:** The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

## Section 1: Description of the Water System

**Zone II #:** 472

**Susceptibility:** High

Well Names	Source IDs
Well #1	1113000-01G

Great Barrington is a mid-size rural community in southwestern Massachusetts. The Town is located within the Housatonic River Valley in the heart of the Berkshires. The Great Barrington Fire District supplies water to some parts of the town of Great Barrington. The District owns and operates one groundwater source (1113000-01G), the main supply, and one surface water source (1113000-01S) that is designated for emergency use only. This report does not address the emergency, surface water supply. The groundwater source is an infiltration gallery located off of Hurlburt Road about 130 feet from the Green River. The infiltration gallery is a concrete chamber 226-feet in length, 4 feet wide with a gravel pack outside of the gallery. The water level in the Green River is somewhat controlled by a stone dam approximately 500 feet downstream of the gallery. The aquifer is a shallow sand and gravel aquifer along the Green River with no evidence of a confining clay unit in the vicinity of the source. The aquifer is therefore, considered highly vulnerable to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration from the ground surface.

The Zone I for the "well" is an oval protection area, 250 radial feet from the outside edges of the infiltration gallery. The Zone II was delineated through the SWAP program utilizing empirical data gathered from an extended duration pumping test, geological mapping and analytical modeling. Please refer to the attached map to view the boundaries of the Zone II.

Water from the source is chlorinated prior to distribution. For current information on monitoring results and treatment, please refer questions to the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report.

## Section 2: Land Uses in the Protection Areas

The Zone II for Great Barrington Fire District is a mixture of residential, agricultural, and forested land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix B.

### Key Land Uses and Protection Issues include:

1. Non-conforming Zone I
2. Residential land uses
3. Transportation corridors
4. Hazardous materials storage and use
5. Oil or hazardous material contamination sites
6. Agricultural activities
7. Comprehensive wellhead protection planning

The overall ranking of susceptibility to contamination for the system is high,

based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2.

**1. Non-conforming Zone I** – The Zone I for the infiltration gallery is an oval shaped area with a radial distance of 250 feet from the edges of the gallery. An active corn/hay field, the District's motor control, chemical feed and storage buildings are all located within the Zone I of the source. Massachusetts drinking water regulation (310 CMR 22.00 Drinking Water) requires public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. Although only water supply activities are allowed by regulation in the Zone I, many public water supplies were developed prior to the Department's regulation and contain non water supply activities such as homes, agriculture and public roads. The District does not have legal control over the activities within Zone I but does have a verbal agreement with the land owner to not utilize fertilizers or pesticides within the Zone I area.

#### Zone I Recommendations:

- ✓ Enter into Right-of-First Refusal or a Memorandum of Understanding agreement with the owner or purchase conservation restrictions to protect the area from development and land uses that may threaten the water supply. Agreement Options - Until land or funding is available for outright land purchase, attempt to obtain a Memorandum of Understanding or a Right of First Refusal. A Memorandum of Understanding (MOU) is an agreement between the landowner and public water supplier in which the landowner agrees not to engage in specific threatening activities. The MOU should be specific to the land use or activity. For instance, if the land is residential with a septic system the owner could agree not to place chemicals, petroleum products, or other hazardous or toxic substances, including septic system cleaners, into the septic system, and agree that the system will be pumped at a specific frequency. Understanding how an activity threatens drinking water quality is an important component of developing an effective MOU.

A Right of First Refusal is a legal document that gives the water supplier the first chance to purchase land when it becomes available. Refer to the information about a Right of First Refusal in the Appendices.

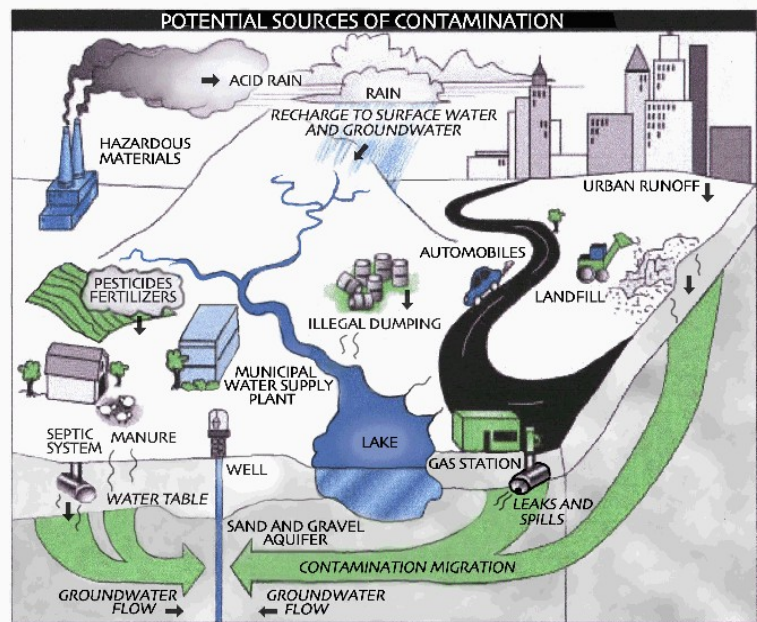
- ✓ To the extent possible, remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Keep any new non-water supply activities out of the Zone I.
- ✓ Contact the property owner to be sure they are aware they are within the Zone I and Zone II of the well. Provide

### Benefits of Source Protection

Source Protection helps protect public health and is also good for fiscal fitness:

- Protects drinking water quality at the source
- Reduces monitoring costs through the DEP Waiver Program
- Treatment can be reduced or avoided entirely, saving treatment costs
- Prevents costly contamination clean-up
- Preventing contamination saves costs on water purchases, and expensive new source development

Contact your regional DEP office for more information on Source Protection and the Waiver Program.



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information about BMPs and monitor for compliance with the agreement to not use pesticides and fertilizers.

**2. Residential Land Uses** – Approximately 12% of the Zone II consists of residential areas. That area does not have public sewers therefore, all residential areas within the Zone II utilize septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Stormwater** – Catch basins and drainage swales transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

**Residential Land Use Recommendations:**

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet “Residents Protect Drinking Water” available in Appendix A and on [www.mass.gov/dep/brp/dws/protect.htm](http://www.mass.gov/dep/brp/dws/protect.htm), which provides BMPs for common residential issues.
- ✓ Work with Planning Boards and Boards of Health in Great Barrington and Egremont to manage new residential developments in the water supply protection areas. Work with the community to foster support and protection for the recharge areas.
- ✓ Promote BMPs for stormwater management and pollution controls.

**3. Transportation Corridors** - Route 71 runs through the Zone II just south of the well and local roads are common throughout the Zone II. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination. Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. Roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash in to catchbasins.

*(Continued on page 6)*

**What are "BMPs?"**

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

**For More Information**

Contact Catherine V. Skiba in DEP's Springfield Office at (413) 755-2119 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, board of health, and the town.

**Source Protection Decreases Risk**

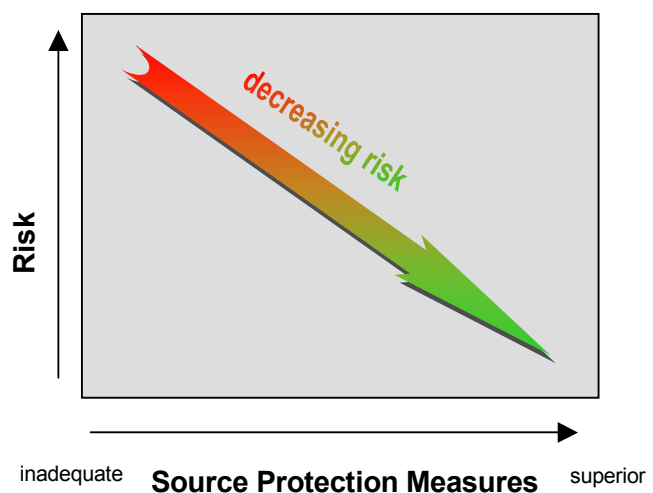


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.



### Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

**Table 2: Land Use in the Protection Areas (Zones I and II)**

For more information, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area

Land Uses	Quantity	Threat	Potential Contaminant Sources*
<b>Agricultural</b>			
Dairy Farms	2	M	Manure (microbial contaminants), pesticides: equipment improper handling
Livestock Operations	1	M	Manure (microbial contaminants), pesticides: equipment improper handling. Numerous small hobby farmers.
Manure Storage or Spreading	2	H	Manure (microbial contaminants), pesticides: equipment improper handling
Fertilizer and Pesticide use	Numerous	H	Cropland uses. Over application. None applied within Zone I area.
<b>Commercial</b>			
Airports	1	H	Fuels, de-icers, salt, and other hazardous chemicals: spills, leaks, or improper handling
Body Shops	1	H	Vehicle paints, solvents, and primer products: improper management
Service Stations/ Auto Repair Shops	2	H	Automotive fluids and solvents: spills, leaks, or improper handling
Cemeteries	2	M	Over-application of pesticides: leaks, spills, improper handling; historic embalming fluids
Furniture Stripping and Refinishing	1	H	Hazardous chemicals: spills, leaks, or improper handling
Medical Facilities	1	M	Biological, chemical, and radioactive wastes: spills, leaks, or improper handling or storage
Paint Shops	1	H	Paints, solvents, other chemicals: spills, leaks, or improper handling or storage
Sand And Gravel Mining/Washing	2	M	Heavy equipment, fuel storage, clandestine dumping: spills or leaks. Numerous small operations throughout Zone II.
<b>Residential</b>			
Fuel Oil Storage (at residences)	Numerous	M	Fuel oil: spills, leaks, or improper handling

Activities	Quantity	Threat*	Potential Source of Contamination
<b>Residential</b>			
Septic Systems / Cesspools	Numerous	M	Hazardous chemicals: microbial contaminants, and improper disposal
Lawn Care / Gardening	Numerous	M	Pesticides: over-application or improper storage and disposal
<b>Miscellaneous</b>			
Aboveground Storage Tanks	Numerous	M	Materials stored in tanks: spills, leaks, or improper handling
Fishing/Boating	River	L	Microbial contaminants, trash
Road and Maintenance Depots	1	M	Deicing materials, automotive fluids, fuel storage, and other chemicals: spills, leaks, or improper handling or storage
Schools, Colleges, and Universities	2	M	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage
Small quantity hazardous waste generators	1	M	Hazardous materials and waste: spills, leaks, or improper handling or storage
Transportation Corridors	Numerous	M	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling
Underground Storage Tanks	12 (Possibly more)	H	Stored materials: spills, leaks, or improper handling
Very Small Quantity Hazardous Waste	3	L	Hazardous materials and waste: spills, leaks, or improper handling or storage
Waste Transfer/ Recycling Station	1	M	Water contacting waste materials: improper management, seepage, and runoff
<b>Notes:</b> <ol style="list-style-type: none"> <li>When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies.</li> <li>For more information on regulated facilities, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination.</li> <li>For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix C: Tier Classified Oil and/or Hazardous Material Sites.</li> </ol> <p>* <b>THREAT RANKING</b> - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and groundwater.</p>			

#### **Transportation Corridor Recommendations:**

- ✓ Identify stormwater drains and the drainage system along transportation corridors. Where applicable, contact the state or local highway departments to request that drains discharge stormwater outside of the Zone II.
- ✓ Consult with the Town and State to have catch basins inspected, maintained, and cleaned on a regular schedule. Street sweeping reduces the amount of potential contaminants in runoff.
- ✓ Continue working with local emergency response teams to ensure that any spills within the Zone II can be effectively contained.

- ✓ If storm drainage maps are available, review the maps with emergency response teams. If maps aren't yet available, work with town officials to investigate mapping options such as the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.
- ✓ Work with local officials during their review of the right of way Yearly Operating Plans to ensure that water supplies are protected during vegetation control. Notify City and town officials of potential USDA funding for mitigation and prevention of runoff pollution through the Environmental Quality Incentives Program (EQIP).
- ✓ Notify community officials of potential USDA funding for mitigation and prevention of runoff pollution through the Environmental Quality Incentives Program (EQIP). The USDA web site is [www.ruraldev.usda.gov](http://www.ruraldev.usda.gov) or call Bruce Philbrick, at the local office in Pittsfield office at 413-443-6867 (his e-mail address is [bruce.philbrick@mapittsfi.fsc.usda.gov](mailto:bruce.philbrick@mapittsfi.fsc.usda.gov)). Review the fact sheet available on line and call the local office of the NRCS for assistance <http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/EQIPFct.pdf>.
- ✓ Visit DEP's Nonpoint Source Pollution web site for additional information and assistance at <http://www.state.ma.us/dep/brp/wm/nonpoint.htm>.

**4. Hazardous Materials Storage and Use** – Less than one percent of the land area within the Zone II is commercial or industrial land uses. Many businesses and industries, including small businesses, use hazardous materials, produce hazardous waste products, and/or store large quantities of hazardous materials in USTs/ASTs. If hazardous materials are improperly stored, used, or disposed, they become potential sources of contamination. Hazardous materials should never be disposed of to a septic system or floor drain leading directly to the ground. The airport is of the greatest concern in the Great Barrington Fire District Zone II, with a high potential for leaks of hazardous materials such as jet fuel. Also there are a few facilities such as auto body shops, furniture strippers, a sawmill and gravel mining operations that may utilize hazardous materials and are currently not registered.

**Hazardous Materials Storage and Use Recommendations:**

- ✓ Work with planning agencies and/or communities to educate local small

**Top 5 Reasons to Develop a Local Wellhead Protection Plan**

- ❶ Reduces Risk to Human Health
- ❷ Cost Effective! Reduces or Eliminates Costs Associated With:
  - ♦ Increased groundwater monitoring and treatment
  - ♦ Water supply clean up and remediation
  - ♦ Replacing a water supply
  - ♦ Purchasing water
- ❸ Supports municipal bylaws, making them less likely to be challenged
- ❹ Ensures clean drinking water supplies for future generations
- ❺ Enhances real estate values - clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.



businesses on best management practices for protecting water supplies. Distribute the fact sheet "Businesses Protect Drinking Water" available in Appendix A and on [www.mass.gov/dep/brp/dws/protect.htm](http://www.mass.gov/dep/brp/dws/protect.htm), which provides BMP's for common business issues.

- ✓ Work with local Boards of Health and businesses to register those facilities that are unregistered generators of hazardous waste or waste oil. Partnerships between businesses, water suppliers, and communities enhance successful public drinking water protection practices.
- ✓ Work with local Boards of Health and businesses to review Massachusetts floordrain requirements. Refer to the brochure "Industrial Floor Drains" for more information and request Floor Drain regulations if they do not exist.

**5. Presence of Oil or Hazardous Material Contamination Sites** – The Zone II or areas immediately adjacent to the Zone II contain a DEP Tier Classified Oil and/or Hazardous Material Release Site indicated on the map as Release Tracking Numbers 1-0014368. Refer to Appendix 3 for more information.

**Oil or Hazardous Material Contamination Sites Recommendation:**

- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination site.

**6. Agricultural Activities** – There are several farms within the Zone II, including dairy farms, hay, vegetable, fruit and corn fields. Pesticides and

fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed. If not contained or applied properly, animal waste from barnyards, manure pits and field application are potential sources of contamination to ground and surface water.

#### **Agricultural Activities Recommendation:**

- ✓ Continue to work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service Farm Plan. They should also be aware of the Department of Food & Agriculture's regulation regarding the use of certain types of pesticides within a Zone II groundwater supply protection areas.
- ✓ Provide information to hobby farmers regarding Best Management Practices. Refer them to <http://www.state.ma.us/dep/brp/dws/protect.htm> for BMPs.
- ✓ Provide information about potential USDA funding for mitigation and prevention of runoff pollution through the Environmental Quality Incentives Program (EQIP). The USDA web site is [www.ruraldev.usda.gov](http://www.ruraldev.usda.gov) or call Bruce Philbrick, at the local office in Pittsfield office at 413-443-6867 (his e-mail address is [bruce.philbrick@mapittsfield.fsc.usda.gov](mailto:bruce.philbrick@mapittsfield.fsc.usda.gov)). Review the fact sheet available online and call the local office of the NRCS for assistance <http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/EQIPFct.pdf>.
- ✓ Visit DEP's Nonpoint Source Pollution web site for additional information and assistance at <http://www.state.ma.us/dep/brp/wm/nonpoint.htm>.

**7. Protection Planning** – Currently, the Towns of Egremont and Great Barrington do not have water supply protection controls that meet DEP's Wellhead Protection regulations 310 CMR 22.21(2). However, the District maintains communication with all host communities for the Zone II and Zone III areas. Protection planning protects drinking water by managing the land area that supplies water to a well. A Wellhead Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply wells.

#### **Protection Planning Recommendations:**

- ✓ Develop a Wellhead Protection Plan. Establish a protection team that includes the various water suppliers in Great Barrington and Sheffield's Water Company, and refer them to <http://mass.gov/dep/brp/dws/protect.htm> for a copy of DEP's guidance, "Developing a Local Wellhead Protection Plan". Work with the town Boards to develop comprehensive water supply protection and planning.
- ✓ Work with the Sheffield Water Company to coordinate protection measures for one another's communities. Include Egremont in the planning process to gain support for comprehensive protection of resources. Please refer to the enclosed map for areas of overlapping Zone IIs.
- ✓ Coordinate efforts with local officials to compare local wellhead protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21 (2). Encourage adoption of controls that minimally meet 310 CMR 22.21(2). For more information on DEP land use controls see <http://mass.gov/dep/brp/dws/protect.htm>.
- ✓ Request that the Boards of Health adopt floordrain controls that meet 310 CMR 22.21(2).

Other land uses and activities within the Zone II that are potential sources of contamination are included in Table 2. Refer to Appendix B for more information about these land uses. Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential

#### **What is a Zone III?**

A Zone III (the secondary recharge area) is the land beyond the Zone II from which surface and ground water drain to the Zone II and is often coincident with a watershed boundary.

The Zone III is defined as a secondary recharge area for one or both of the following reasons:

1. The low permeability of underground water bearing materials in this area significantly reduces the rate of groundwater and potential contaminant flow into the Zone II.
2. The groundwater in this area discharges to a surface water feature such as a river, rather than discharging directly into the aquifer.

The land uses within the Zone III are assessed only for sources that are shown to be groundwater under the direct influence of surface water.

#### **Additional Documents:**

To help with source protection efforts, more information is available by request or online at [mass.gov/dep/brp/dws](http://mass.gov/dep/brp/dws) including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix



sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

### **Section 3: Source Water Protection Conclusions and Recommendations**

#### **Current Land Uses and Source Protection:**

As with many water supply protection areas, the system Zone IIs contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- The acquisition of land and fostering a relationship with abutters.
- The cooperative efforts with Alford and Egremont with respect to emergency response.
- The agreements for use of land within the Zone I area and the gentlemen's agreement not to use pesticides and fertilizers. However, this type of agreement should be formalized. Refer to the first item under Source Protection recommendations below.

#### **Source Protection Recommendations:**

To better protect the sources for the future:

- ✓ Enter into Right-of-First Refusal or a Memorandum of Understanding agreement with the owner or purchase conservation restrictions to protect the area from development and land uses that may threaten the water supply. Agreement Options - Until land or funding is available for outright land purchase, attempt to obtain a Memorandum of Understanding or a Right of First Refusal. A Memorandum of Understanding (MOU) is an agreement between the landowner and public water supplier in which the landowner agrees not to engage in specific threatening activities. The MOU should be specific to the land use or activity. For instance, if the land is residential with a septic system the owner could agree not to place chemicals, petroleum products, or other hazardous or toxic substances, including septic system cleaners, into the septic system, and agree that the system will be pumped at a specific frequency. Understanding how an activity threatens drinking water quality is an important component of developing an effective MOU. A Right of First Refusal is a legal document that gives the water supplier the first chance to purchase land when it becomes available. Refer to the information about a Right of First Refusal in the Appendices.
- ✓ Inspect the Zone I regularly, and when feasible, remove any non-water supply activities.
- ✓ Educate residents on ways they can help you to protect drinking water sources.
- ✓ Continue working with emergency response teams to ensure that they are aware of the Zone II and to cooperate on responding to spills or accidents and contact you.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination site.
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a NRCS farm plan to protect water supplies. Work with hobby farmers to educate them and supply guidance regarding BMPs.
- ✓ Work with the community to develop and implement a Wellhead Protection Plan.

DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community. The Department's Wellhead Protection Grant Program and Source Protection Grant Program provide funds to assist public water suppliers in addressing water supply source protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the Grant Program. Please note: each spring DEP posts a new Request for Response for the grant program (RFR).

#### **Conclusions:**

These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix A.

#### **➤ Partner with Local Businesses:**

Since many small businesses and industries use hazardous materials and produce hazardous waste products, it is essential to educate the business community about drinking water protection. Encouraging partnerships between businesses, water suppliers, and communities will enhance successful public drinking water protection practices.

➤ **Educate Residents:**

If managed improperly, household hazardous waste, septic systems, lawn care, and pet waste can all contribute to groundwater contamination. Hazardous materials include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. If a septic system fails or is not properly maintained, and animal waste could be a potential source of microbial contamination.

➤ **Provide Outreach to the Community:**

Public education and community outreach ensure the long-term protection of drinking water supplies. Awareness often generates community cooperation and support. Residents and business owners are more likely to change their behavior if they know where the wellhead protection recharge area is located; what types of land uses and activities pose threats; and how their efforts can enhance protection.

➤ **Plan for the Future:**

One of the most effective means of protecting water supplies is local planning, include adoption of local controls to protect land use, regulations related to watersheds and ground water protection. These controls may include health ordinances/regulations, discharge prohibitions, general ordinances, and zoning by-laws that prohibit or control potential sources of contamination within the protection areas.

➤ **Other Funding Sources:**

Other grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: <http://mass.gov/dep/brp/mf/mfpubs.htm>. The USDA also has various funding sources for government, non-government organizations and agricultural facilities through programs such as those listed on the USDA web site <http://search.sc.egov.usda.gov/nrcs.asp?qu=eqip&ct=NRCS>. One program in particular, the Environmental Quality Incentives Program (EQIP) may be utilized in a variety of projects from DPW stormwater management to farm nutrient management designed to protect surface and groundwater. Review the fact sheet available on line and call the local office (Pittsfield 413-443-6867) of the NRCS for assistance <http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/EQIPFct.pdf>. Contact Bruce W. Philbrick the District Conservationist at 413-443-6867 or e-mail at [bruce.philbrick@mapittsfi.e.fsc.usda.gov](mailto:bruce.philbrick@mapittsfi.e.fsc.usda.gov)

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

## **Section 4: Appendices**

- A. Protection Recommendations
- B. Regulated Facilities within the Water Supply Protection Area
- C. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
- D. Additional Documents on Source Protection

**Table 3: Current Protection and Recommendations**

Protection Measures	Status	Recommendations
<b>Zone I</b>		
Does the Public Water Supplier (PWS) own or control the entire Zone I?	<b>NO</b>	Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
Is the Zone I/Zone II area posted with appropriate signs?	<b>YES</b>	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is Zone I regularly inspected?	<b>YES</b>	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	<b>YES</b>	Continue monitoring non-water supply activities in Zone Is.
<b>Municipal Controls</b> (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21 (2)?	<b>NO</b>	Although the District has met DEP's best efforts for well-head protection, the protection area should be expanded and bylaws revised as recommended in the SWAP Zone II report. Refer to <a href="http://www.state.ma.us/dep/brp/dws/">www.state.ma.us/dep/brp/dws/</a> for model by-laws and health regulations, and current regulations.
Do neighboring communities protect the Zone II areas extending into their communities?	<b>NO</b>	Work with the neighboring municipalities of Egremont and Alford to develop wellhead protection controls and include the Zone II and III in a water supply protection district.
<b>Planning</b>		
Does the PWS have a Wellhead Protection Plan?	<b>NO</b>	Develop a wellhead protection plan. Follow "Developing a Local Wellhead Protection Plan" available at: <a href="http://www.state.ma.us/dep/brp/dws/">www.state.ma.us/dep/brp/dws/</a> . Consider working with the Sheffield Water company to develop a comprehensive wellhead protection plan in Great Barrington and Egremont.
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	<b>YES</b>	Augment plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams. The District already is on the "to be notified list" for all emergencies in Great Barrington and Egremont.
Does the municipality have a wellhead protection committee?	<b>NO</b>	Establish committee; include representatives from citizens' groups, neighboring communities, and the business community. Work with the Sheffield Water Company to promote comprehensive protection in Great Barrington and with the Towns of Egremont and Alford.
Does the Board of Health conduct inspections of commercial and industrial activities?	<b>NO</b>	For more guidance see "Hazardous Materials Management: A Community's Guide" at <a href="http://www.state.ma.us/dep/brp/dws/files/hazmat.doc">www.state.ma.us/dep/brp/dws/files/hazmat.doc</a>
Does the PWS provide wellhead protection education?	<b>Partial</b>	Aim additional efforts at commercial, industrial and municipal uses within the Zone II.

1-0014368

## APPENDIX B:

### REGULATED FACILITIES WITHIN THE WATER SUPPLY PROTECTION AREA

#### DEP Permitted Facilities

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class	Facility Description
185822	Simons Rock Of Bard College	84 Alford Street	Great Barrington	VSQG	Hazardous Waste Generator	College
	Autobody/Repair	78 Egremont Plain Road	Great Barrington	VSQG	Hazardous Waste Generator	Autobody/Repair
	Egremont DPW* and Transfer Station*	171 Egremont Plain Road	Egremont	VSQG	Hazardous Waste Generator	DPW/Transfer Station

\* Note: This facility is just outside of the Zone II.

#### Underground Storage Tanks:

Facility Name	Address	Town	Description	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
Berkshire Aviation Enterprises	Egremont Plain Road	Great Barrington	Airport	1 Wall	Approved In Tank Monitor	20,000	Gasoline
				1 Wall	Approved In Tank Monitor	4,000	Gasoline
Agar Oil*	154 Hurlbert Road	Great Barrington	Fuel distributor	1 Wall	Approved In Tank Monitor	10,000	Kerosene
				1 Wall	Approved In Tank Monitor	10,000	Diesel



				1 Wall	Approved In Tank Monitor	20,000	Fuel Oil
				1 Wall	Approved In Tank Monitor	20,000	Gasoline
				1 Wall	Approved In Tank Monitor	20,000	Gasoline
				1 Wall	Approved In Tank Monitor	20,000	Fuel Oil
				1 Wall	Approved In Tank Monitor	10,000	Diesel
				2 Wall	Approved In Tank Monitor	500	Gasoline
				2 Wall	Approved In Tank Monitor	500	Diesel
				1 Wall	Interstitial Monitoring	1,000	Fuel Oil

For more information on underground storage tanks, visit the Massachusetts Department of Fire Services web site: <http://www.state.ma.us/dfs/ust/ustHome.htm>

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities may be located within the water supply protection area(s) that should be considered in local drinking water source protection planning.

\* Agar Fuel Storage facilities are just outside of the Zone II area

## **APPENDIX C – Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas**

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at <http://www.state.ma.us/dep/bwsc>. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at <http://www.state.ma.us/dep/bwsc/sitellst.htm>, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

**Table 1:** Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN)

<b>RTN</b>	<b>Release Site Address</b>	<b>Town</b>	<b>Contaminant Type</b>
1-0014386	50 Prospect Lake Road	Egremont	Oil

For more location information, please visit the DEP website for Bureau of Waste Site Cleanup <http://www.state.ma.us/dep/bwsc/sitelist.htm>.